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EXAMINER	
CAPUTO, LISA M	
ART UNIT	**PAPER NUMBER**
2876	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/837,744	SCHRAMM, HARRY F.	
	Examiner	Art Unit	
	Lisa M Caputo	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7-24,26-35 and 38-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-24 and 26-32* is/are allowed.

6)☒ Claim(s) *1-3,5,9-20,33-35 and 40-46* is/are rejected.

7)☒ Claim(s) *7,8,38 and 39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the amendment filed 15 June 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5, 9, 12, 33-35, 40, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christy (U.S. Patent No. 6,119,943) in view of Arnold et al. (U.S. Patent No. 6,491,221, from hereinafter "Arnold").

Christy teaches a multi-layer bar code arrangement that uses wavelength separation. Christy discloses FIG. 1 schematically illustrates a substrate 10 according to the present invention. The substrate 10 material itself is typically paper, but may also comprise packaging material, plastic, films, or almost any material capable of receiving and retaining clear machine readable imaging thereon (as recited in claim 5 of the instant application). In a predetermined area--shown in dotted line at 11 in FIG. 1--a first machine readable identification code 12 is imaged on substrate 10. The first code 12 is a bar code, although other machine readable codes may also be utilized. It is typically imaged on utilizing a toner that is applied by electron beam, or ion deposition, or like techniques such as ink jet, electrophotography or electrography. The toner is preferred to be of a spectral response in contrast to that of the substrate 10 in the region of the

first predetermined wavelength range of electromagnetic energy, but one that does not interfere with the response of the second code 13. The first code 12 is opaque to a first predetermined wavelength range of electromagnetic energy (e.g. substantially the infra-red region of light), and is transparent to a second predetermined wavelength range of electromagnetic energy different from the first range (e.g. substantially the visible light spectrum). The substrate of FIG. 1 also comprises a second machine readable code 13 which overlays and at least partially covers the first code 12 (as recited in claim 12 of the instant application). The second code 13, also imaged using toner and typically by electron beam or ion deposition techniques, is transparent to the first predetermined wavelength range of electromagnetic energy, and opaque to the second range. As for the code 12, the code 13 is a bar code. An example of the infra-red-opaque toner that could be utilized for the first code 12 is a blend available from ICMI and known as "QA6-14B" which uses a small percentage load of an infra-red absorbing dye in the toner. The toner used for the second code 13 may comprise a jet ink from a Canon Bubblejet Cartridge (BC-01), which is opaque in the visible spectrum but transparent in the infrared. Alternatively ultra-violet responding toner could be incorporated into the toner used for the top, second code 13. Utilizing the substrate of FIG. 1, more information can be packed into the area 11 than in conventional systems. Both bar codes 12, 13 are capable of being readily scanned, however. FIG. 2 schematically illustrates this. Shown are two different scanner heads 15, 16 connected by leads 17, 18 respectively to an electronic controller 19, all of these elements being conventional per se. The heads 15, 16 are illustrated in FIG. 2 in the form of wand scanners. The head 15 is a scan head

which emits light in the visible range, such as an RJS Autoscan bar code verifier designed for the visible range, while the head 16 is designed for the infra-red range (e.g. also an RJS Autoscan). The reflectance plots from the electronic controller 19 are shown schematically in FIG. 3, and this information is ultimately sent to a decoding algorithm to translate signals to useful data (as recited in claims 44-46 of the instant application; further it is well known in the art that ASCII data strings are conventionally decoded in order to discern information to computers and video screens). In the FIG. 2 embodiment the bar codes 12, 13 are scanned in two different passes. FIG. 4 illustrates an exemplary scanner according to the present invention in which the heads 15, 16 are mounted by a common housing assembly. The common mounting means may be the housing 21, which is shown in cross-section in FIG. 4, having side walls to which the scanner heads 15 are mounted, as by mounting bands 22. The housing 21 itself may be contoured to easily fit in a user's hand, or to be mounted on an automated piece of equipment. Utilizing the apparatus 23 of FIG. 4 it is possible to read both of the bar codes 12, 13 in a single pass. While the apparatus 23 is exemplary, a wide variety of different embodiments can also be utilized. For example the mounting means may mount two conventional stationary scanning heads, such as provided in supermarket check out counters, adjacent each other, typically in line in the expected direction of movement of the substrate to be scanned with respect to the scanner heads. Either the scanner heads 15, 16 can be moved relative to the substrate 10, or vice versa, or both can be moved relative to each other at the same time. A single head emitting two (or more) discrete light wavelength ranges also may be utilized.

While the above description is provided for a situation in which there are two bar codes 12, 13, it is to be understood that other bar codes may also be provided within the area 11. This is schematically illustrated at 25 in FIG. 1 by a third bar code 25. The third bar code 25 will be imaged over and at least partially cover the codes 12, 13, and the third code 25 is transparent to the first and second predetermined wavelength ranges, and responsive either by its opacity to a third range or by its ability to fluoresce in the presence of the energy of a third range, while the first and second codes are transparent to that third range. (Reading of the third bar code 25 may be provided utilizing the third reader 20 schematically illustrated in dotted line in FIG. 2.). In order to implement utilization of a third 25, or more, bar codes in the same area 11, dye agents may be utilized which are responsive to very narrow wavelength bands within the infra-red region, or within the visible spectrum, such as available from PitKit. Any number of layers could be utilized as long as the detector (scanner) band pass is narrow enough to prevent interfering cross-talk from other layers of the stacked bar codes. FIG. 5 illustrates the basic concept of the invention utilized with two-dimensional bar codes (i.e. adding a third dimension thereto) (as recited in claims 2-3 and 34-35 of the instant application). In this embodiment components comparable to the FIG. 1 embodiment are shown by the same reference numeral only preceded by a "1". Within the predetermined area 111 of the substrate 110 a first two-dimensional bar code 112 is imaged, and then a second 113 is imaged over the first 112. Bar code layer 112 is typically an IR opaque layer which is transparent to the visible spectrum, while the top bar code layer 113 is composed of toner which is transparent to the infra-red region and

opaque to the visible light spectrum. It will be seen from FIGS. 1-5 that typically multiple layers of bar codes or other machine readable codes substantially increase the density of information gathered by the scanner heads within the same scan pass length or area coverage. FIG. 6 illustrates another exemplary embodiment according to the present invention. In this embodiments components the same as those of FIG. 1 are shown by the same reference numeral. In the FIG. 6 embodiment the substrate 10 is not designed to pack more information into a small area (although that could be done too by providing two bar codes 12, 13 as illustrated in FIG. 1 and then overlaying them as will be described hereafter); rather the main function of the FIG. 6 embodiment is to provide a security feature which hides the bar code 12 so that it is "invisible". While in the FIG. 1 embodiment the bar code 13 essentially "hides" the bar code 12 so that a security feature is provided there too, the top bar code 13 is readily viewed. In the FIG. 6 embodiment the bar code 12 is not recognizable at all.

In the FIG. 6 embodiment an overlay 27 is provided which substantially completely covers the bar code 12 and the predetermined area 11, in fact covering the overlapping area 28 of the substrate 10. The bar code 12 is as described in FIG. 1 whereas the overlay in the form of a security block 27 comprises toner which is transparent to the wavelength of light to which the code 12 is opaque, and opaque to the second predetermined wavelength range of electromagnetic energy. In this embodiment the code 12 need not be transparent in the visible area of the spectrum so long as the block 27 is sufficiently opaque to hide it. The block 27 need not be imaged onto the substrate 10, overlaying the code 12, by a toner-based process (as recited in

claims 9 and 40 of the instant application). Imaging may be done by numerous other processes such as conventional ink jet printing, or conventional litho or flexo printing techniques. The block 27 need not be black but can be any number of different "spot colors", or multiple layers of spot colors. In one example of implementation of the invention as described above, simulated bars of a bar code 12 were imaged and fixed onto a paper substrate 10 using the ICMI QA6-14B infra-red absorbing invisible toner. These bars were scanned with an RJS Autoscan unit using the infra-red wavelength scanning head. (The exact wavelength and bandwidth is unknown.) The width of the bars were measured at 0.0740". The simulated bars of a bar code 12 were then over printed with a blob 27 of black spot color; and a second bar code using a Canon BJ-10 bubble jet printer. The cartridge used was the Canon BC-01 cartridge with the standard factory ink in it. This was previously tested and founded to be transparent in the infra-red area of the spectrum. When the infra-red scanning head of the RJS Autoscan was placed over the blob of infra-red absorbing invisible toner 27 and the bar code, the only thing which the scan head recorded was the simulated bar code 12 bars underneath, which were created with the IR opaque toner. The bar widths were measured at 0.0742", well within the limits of experimental error. It will thus be seen that according to the present invention a simple yet effective substrate, method of forming the substrate, and scanner particularly utilizable with such a substrate, have been provided which allow more information to be packed into a predetermined area on a substrate, and/or provide a security feature for a bar code on a substrate. While the invention has been herein shown and described in what is presently conceived to be the most practical and

preferred embodiment thereof it will be apparent to those of ordinary skill in the art that many modifications may be made thereof within the scope of the invention, which scope is to be accorded the broadest interpretation of the appended claims so as to encompass all equivalent products, processes, and devices (see Figures 1-8, col 3 line 59 to col 6 line 42).

Hence, Christy teaches a machine readable multiple layer label (within an automatic identification system) that has a plurality of machine readable marking layers stacked one upon another with each marking layer encoding an identification symbol detectable using a sensor.

Regarding claims 1 and 33, Christy fails to teach that the symbol is detectable using a sensor selected from the group of capacitance, thermal, and magnetic sensors.

Arnold teaches about security documents. Arnold discloses that at the second security level the magnetic sensor would read the combined signal of the two layers. This would be achieved by using, for example, a Flying Null sensor similar to that used in Security Level One but utilizing a higher magnetic gradient field. The magnetic layer 2 would be produced so that its spatial relationship to magnetic layer 1 is not fixed i.e. random In this way the combined signal from both the magnetic layers will vary from one document to another even of the same denomination, When the document is produced the two magnetic signatures would be read simultaneously and the output encrypted using either symmetric or asymmetric encoding techniques. The encrypted signal would then be printed in matching-readable format onto the document. On verification this feature could be used in two ways: firstly for lower levels of security the

presence of the magnetic features on both faces could be determined, secondly for higher levels of security, the combined signature can be decoded and compared to the encrypted reference added at the time of manufacture (see Figures 1-5, col 3 line 17 to col 5 line 5, especially col 4, lines 40-55). Hence, Arnold teaches the use of a magnetic sensor to read a machine readable object with multiple layers.

In view of the teaching of Arnold, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the use of a magnetic sensor to read the layers of the label because a magnetic sensor is able to read the information on a label efficiently, discreetly, and in a cost effective manner since magnetic sensors are conventional in the art.

3. Claims 10-11, 13-20, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christy as modified by Arnold and further in view of Greenaway (U.S. Patent No. 4,119,361). The teachings of Christy as modified by Arnold have been discussed above.

Regarding claims 10-11, 14, and 41 Christy as modified by Arnold fails to teach that there is a neutral layer disposed between two of the plurality of layers, or separating two of the layers.

Greenaway teaches a multiplayer identification card. Greenaway discloses that the present invention comprises generally an identification card containing information in the form of machine-readable optical markings contained between two protective layers. The layers prevent determination of the optical markings by ordinary observation and serve to prevent fraudulent determination of those markings by removal of the

layers. The card may be constructed for machine reading either by use of transmission or reflection procedures. More particularly, the objects of the invention may be achieved by the combination of the following features: (a) the optical markings are hidden or obscured between two protective layers, one of which at least can be penetrated by infrared light, and both protective layers are opaque to light of smaller wavelengths; (b) the optical markings have a fine structure with at least 300 lines per mm; and (c) the protective layers are so connected to the information layer that the information is destroyed when one of the protective layers is removed. Particular embodiments are more fully described hereinafter in connection with the drawing.

The identification card illustrated in FIG. 1 comprises a protective layer 1, an information layer 2 and a further protective layer 3. The information layer 2 is embedded between the two protective layers 1 and 3 and is so joined to them, in the manner explained below, that if an attempt is made to remove one of the protective layers 1 or 3 the information stored in the information layer 2 is destroyed. The protective layers 1 and 3 can be penetrated by infrared light, but are opaque to light of shorter wavelengths. The optical markings (not shown in FIG. 1), which are provided in the information layer 2, are hidden between the two protective layers 1 and 3, and cannot be detected in visible light. One or more infrared reading light beams 4, which are directed onto the identification card from a reading apparatus (not illustrated) are able to penetrate the protective layers 1 and 3 without restriction and they leave the identification card as modulated information light beams 5 (see Figure 1, col 1 line 67 to col 2 line 40).

In view of the teaching of Greenaway it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ neutral layers so that the marking layers have an additional layer of protection and data integrity is ensured. Regarding claim 14, Christy teaches that the substrate of FIG. 1 also comprises a second machine readable code 13 which overlays and at least partially covers the first code 12, which causes an offset.

Regarding independent claim 13, Christy fails to teach that the symbol is detectable using a sensor selected from the group of capacitance, thermal, and magnetic sensors.

Arnold teaches about security documents. Arnold discloses that at the second security level the magnetic sensor would read the combined signal of the two layers. This would be achieved by using, for example, a Flying Null sensor similar to that used in Security Level One but utilizing a higher magnetic gradient field. The magnetic layer 2 would be produced so that its spatial relationship to magnetic layer 1 is not fixed i.e. random In this way the combined signal from both the magnetic layers will vary from one document to another even of the same denomination, When the document is produced the two magnetic signatures would be read simultaneously and the output encrypted using either symmetric or asymmetric encoding techniques. The encrypted signal would then be printed in matching-readable format onto the document. On verification this feature could be used in two ways: firstly for lower levels of security the presence of the magnetic features on both faces could be determined, secondly for higher levels of security, the combined signature can be decoded and compared to the

encrypted reference added at the time of manufacture (see Figures 1-5, col 3 line 17 to col 5 line 5, especially col 4, lines 40-55). Hence, Arnold teaches the use of a magnetic sensor to read a machine readable object with multiple layers.

In view of the teaching of Arnold, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the use of a magnetic sensor to read the layers of the label because a magnetic sensor is able to read the information on a label efficiently, discreetly, and in a cost effective manner since magnetic sensors are conventional in the art.

Further regarding claim 13, Christy as modified by Arnold fails to teach that there is a neutral layer disposed between two of the plurality of layers, or separating two of the layers.

Greenaway teaches a multiplayer identification card. Greenaway discloses that the present invention comprises generally an identification card containing information in the form of machine-readable optical markings contained between two protective layers. The layers prevent determination of the optical markings by ordinary observation and serve to prevent fraudulent determination of those markings by removal of the layers. The card may be constructed for machine reading either by use of transmission or reflection procedures. More particularly, the objects of the invention may be achieved by the combination of the following features: (a) the optical markings are hidden or obscured between two protective layers, one of which at least can be penetrated by infrared light, and both protective layers are opaque to light of smaller wavelengths; (b) the optical markings have a fine structure with at least 300 lines per

mm; and (c) the protective layers are so connected to the information layer that the information is destroyed when one of the protective layers is removed. Particular embodiments are more fully described hereinafter in connection with the drawing.

The identification card illustrated in FIG. 1 comprises a protective layer 1, an information layer 2 and a further protective layer 3. The information layer 2 is embedded between the two protective layers 1 and 3 and is so joined to them, in the manner explained below, that if an attempt is made to remove one of the protective layers 1 or 3 the information stored in the information layer 2 is destroyed. The protective layers 1 and 3 can be penetrated by infrared light, but are opaque to light of shorter wavelengths. The optical markings (not shown in FIG. 1), which are provided in the information layer 2, are hidden between the two protective layers 1 and 3, and cannot be detected in visible light. One or more infrared reading light beams 4, which are directed onto the identification card from a reading apparatus (not illustrated) are able to penetrate the protective layers 1 and 3 without restriction and they leave the identification card as modulated information light beams 5 (see Figure 1, col 1 line 67 to col 2 line 40).

In view of the teaching of Greenaway it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ neutral layers so that the marking layers have an additional layer of protection and data integrity is ensured.

Regarding claims 15-20 and 42-43 Christy as modified by Arnold fails to teach making the medium by removing parts, forming a recess and then re-filling it, using a transfer tape, using a stencil, or using a segmented symbol.

Greenaway teaches FIG. 3 shows an identification card readable by transmission, and FIG. 4, a card readable by reflection. In each case the protective layer 9 additionally serves as the information layer. It is therefore necessary to join together only two layers in these embodiments, the joining being in such a way that the information is destroyed when the layers are separated from each other. The optical markings, designated by the numeral 10 in FIGS. 3 and 4, are preferably impressed in the protective layer 9, which is made of plastics material. In FIG. 4, they are covered by the reflection layer 6. The second protective layer 3 in FIG. 4 is laminated with the layer 9 or 6 in such a way that an intimate bond is achieved. The protective layer 3 may be a lacquer layer which reacts chemically with the contiguous layer. It may however be bonded on with an adhesive that reacts chemically with both layers. In both cases the chemical reaction is limited to a thin boundary layer so that the optical markings 10 are not destroyed (see Figures 3-4, col 3 lines 37-55).

In view of the teaching of Greenaway, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ etching or re-filling because these are efficient means of creating barcodes or machine readable codes on a material that is not conducive to conventional barcode processes. In addition, using a stencil, a transfer tape, or segmented symbol are also favorable methods to produce the barcode and can also be used as recognized methods of coding.

Allowable Subject Matter

4. Claims 21-24 and 26-32 are allowed.

5. Claims 7-8 and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 7-8, 21,24, 26-32, and 38-39, the best prior art of record in the form of Christy and Arnold fails to teach the use of two different sensors (i.e. one radar and one other than radar from the group of ultrasonic, x-ray, capacitance, thermal, and magnetic) in order to be able to identify a multiple layer label that has marking layers that each comprise a different medium. Also see applicant's remarks filed 15 June 2004.

Response to Arguments

7. Applicant's arguments with respect to claims 1-46 have been considered but are moot in view of the new ground(s) of rejection.

8. Examiner appreciates applicant's arguments and has cited new prior art in the form of Arnold in order to overcome the limitations of the newly amended claims.

In response to applicant's arguments that Greenaway does not seem to be a relevant reference, examiner disagrees and respectfully submits that Greenaway teaches the limitations absent (i.e. use of a neutral layer and the application of a marking layer) from Christy and Arnold and the references are indeed combinable with the knowledge of one of ordinary skill in the art.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ***Lisa M. Caputo*** whose telephone number is **(571) 272-2388**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached at **(571) 272-2398.** The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**lisa.caputo@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMC
September 5, 2004

THIEN M. LE
PRIMARY EXAMINER